

**Amendments to the claims:**

Cancel claims 2, 3, 5 and 7-17.

Amend claims 1, 4 and 6.

1. (Currently Amended) A magnetic read head that has a head surface comprising:  
a read sensor that forms a portion of said head surface and has first and second side walls  
which extend into the read head from said head surface;  
nonmagnetic electrically insulative first and second read gap layers wherein the first read gap  
layer includes a read gap material layer and first and second refill gap layers;  
the read sensor being located between the first and second read gap layers;  
the read gap material layer having first and second depressions which extend laterally from  
the first and second side walls respectively of the sensor;  
the first and second refill gap layers being disposed in the first and second depressions and  
engaging a bottom portion of the first side wall and engaging a bottom portion of the second side  
wall respectively;  
the first read gap layer having first and second portions which extend laterally from the first  
and second side walls of the sensor and a third portion which engages a bottom surface of the sensor  
and is located between said first and second portions;  
each of said first and second portions having a thickness which is greater than a thickness of  
said third portion; [[and]]  
first and second hard bias layers interfacing the first and second refill gap layers respectively  
and the top portion of the first and second side walls respectively;  
said first and second lead layers interfacing the first and second hard bias layers respectively;  
each of the first and second hard bias layers and the sensor having a top surface;  
the top surfaces of the first and second hard bias layers and the sensor lying within a common  
plane;  
a first lead layer electrically connected to a top portion of the first side wall and a second lead  
layer electrically connected to a top portion of the second side wall[.];  
a ferromagnetic first shield layer;  
the first read gap layer interfacing the first shield layer;  
the second read gap layer interfacing the sensor; and  
a ferromagnetic second shield layer interfacing the second read gap layer.

2.- 3. (Cancelled)

1           4.     (Currently Amended)       A magnetic head assembly that has a head surface  
2 comprising:  
3           a write head;  
4           a read head adjacent the write head comprising:  
5                a read sensor that forms a portion of said head surface and that has first and second  
6 side walls which extend into the read head from said head surface;  
7                nonmagnetic electrically insulative first and second read gap layers wherein the first  
8 read gap layer includes a read gap material layer and first and second refill gap layers;  
9                the read sensor being located between the first and second read gap layers;  
10              the first read gap material layer having first and second depressions which extend  
11 laterally from the first and second side walls respectively of the sensor;  
12              the first and second refill gap layers being disposed in the first and second  
13 depressions and engaging a bottom portion of the first side wall and engaging a bottom  
14 portion of the second side wall respectively;  
15              the first read gap layer having first and second portions which extend laterally from  
16 the first and second side walls of the sensor and a third portion which is between the first and  
17 second portions and is located between the sensor and the first shield layer;  
18              each of said first and second portions having a thickness which is greater than a  
19 thickness of said third portion;  
20              first and second hard bias layers interfacing the first and second refill gap layers  
21 respectively and the top portion of the first and second side walls respectively;  
22              said first and second lead layers interfacing the first and second hard bias layers  
23 respectively.  
24              each of the first and second hard bias layers and the sensor having a top surface;  
25              the top surfaces of the first and second hard bias layers and the sensor lying within  
26 a common plane;  
27              a first lead layer electrically connected to a top portion of the first side wall and a  
28 second lead layer electrically connected to a top portion of the second side wall;  
29              a ferromagnetic first shield layer;  
30              the first read gap layer interfacing the first shield layer;  
31              the second read gap layer interfacing the sensor; and  
32              a ferromagnetic second shield layer interfacing the second read gap layer.

5. (Cancelled)

6. (Currently Amended) A magnetic disk drive comprising:

at least one magnetic head assembly[[:]] that has a head surface;

the magnetic head assembly having a write head and a read head;

the read head including:

a read sensor that forms a portion of said head surface and has first and second side walls which extend into the read head from said head surface;

nonmagnetic electrically insulative first and second read gap layers wherein the first read gap layer includes a read gap material layer and first and second refill gap layers;

the read sensor being located between the first and second read gap layers;

the read gap material layer having first and second depressions which extend laterally from the first and second side walls respectively of the sensor;

the first and second refill gap layers being disposed in the first and second depressions and engaging a bottom portion of the first side wall and engaging a bottom portion of the second side wall respectively;

the first read gap layer having first and second portions which extend laterally from the first and second side walls of the sensor and a third portion which is between the first and second portions and is located between the sensor and the first shield layer;

each of said first and second portions having a thickness which is greater than a thickness of said third portion;

first and second hard bias layers interfacing the first and second refill gap layers respectively and the top portion of the first and second side walls respectively;

said first and second lead layers interfacing the first and second hard bias layers respectively;

each of the first and second hard bias layers and the sensor having a top surface;

the top surfaces of the first and second hard bias layers and the sensor lying within a common plane;

a first lead layer electrically connected to a top portion of the first side wall and a second lead layer electrically connected to a top portion of the second side wall;

a ferromagnetic first shield layer;

30 the first read gap layer interfacing the first shield layer;  
31 the second read gap layer interfacing the sensor; and  
32 a ferromagnetic second shield layer interfacing the second read gap layer;  
33 a housing;  
34 a magnetic medium supported in the housing;  
35 a support mounted in the housing for supporting the magnetic head assembly with said head  
36 surface facing the magnetic medium so that the magnetic head assembly is in a transducing  
37 relationship with the magnetic medium;  
38 a motor for moving the magnetic medium; and  
39 a processor connected to the magnetic head assembly and to the motor for exchanging signals  
40 with the magnetic head assembly and for controlling movement of the magnetic medium.

7.- 17. (Cancelled)